



GF 2000 GREEN FILTER TEST 3 REPORT

7 July, 2000

Product : 'GF 2000 Green Filter' Unit

Testing Objective : -

1. The fuel saving when the 'GF 2000 Green Filter' Unit is installed to the engine.
2. The exhaust gas quality improvement, when the 'GF 2000 Green Filter' Unit is installed to the engine.

Equipment used : -

1. BOSCH EXHAUST GAS ANALYSER
2. TOYOTA 4A 1600cc EFI-ENGINE / 1986
3. NISSAN PULSAR VEHICLE, 1400 cc – 1990
Mileage accumulation : 170674 km



Testing period : -

From 12 / 6 / 2000 to 6 / 7 / 2000

Road testing procedure : -

1. The petrol tank was topped up until reach the neck of the filler.
2. The vehicle mileage meter was set to zero position.
3. The vehicle was driven along the No.3 route through the Tai Lam Tunnel to Kowloon and travel the same distance each time.
4. The vehicle was driven along the TOLO High-way at non-peak hours with high speed to travel the same distance each time.
5. Distance travel was recorded from the mileage meter

6. The petrol tank was refilled at the same petrol station, hence that fuel consumption could be determine before and after installed the 'GF 2000 Green Filter' unit to the engine.
7. All data were obtained corresponding to the similar traffic condition each time.
8. Use Bosch Exhaust Gas Analyser to determine the exhaust gas quality before and after installed the 'GF 2000 Green Filter' unit to the engine.

Testing results : -

ROAD TEST

The vehicle travelled 2128 km.



Description	Ambient Temperature	Without GF 2000	With GF 2000	Fuel Save (%)
CITY DRIVE Fuel consumed at average speed 51 km/h (with air-condition on)	28 °C	12.7 km/L	14 km/L	10.2
HIGHWAY DRIVE Fuel consumed at average speed 87.6 km/h (with air-condition on)	30 °C	15.7 km/L	17.6 km/L	12.1

EXHAUST EMISSIONS

NISSAN PULSAR 1990/1400 cc ENGINE SPEED (r.p.m.)	Without GF 2000			With GF 2000			Air Temperature 26 °C	
	CO (%)	HC (ppm)	CO ₂ (%)	CO (%)	HC (ppm)	CO ₂ (%)	CO Change (%)	HC Change (%)
1670	6.20	587	10.8	6.00	532	10.8	-3.23	-9.37
2020	5.80	600	11.1	5.14	514	11.4	-11.4	-14.3
2440	4.66	463	12.0	4.06	351	12.2	-12.9	-24.2
3230	3.05	308	12.9	2.87	241	13.0	-5.90	-21.8
TOYOTA / EFI 1984/1600 cc ENGINE SPEED (r.p.m.)	Without GF 2000			With GF 2000			Air Temperature 25 °C	
	CO (%)	HC (ppm)	CO ₂ (%)	CO (%)	HC (ppm)	CO ₂ (%)	CO Change (%)	HC Change (%)
2020	1.24	161	8.70	1.08	150	8.80	-12.9	-6.83
2520	1.92	178	9.20	1.77	152	9.30	- 7.81	-14.6
3020	2.84	156	9.10	2.71	147	9.20	-4.58	-5.77
3610	1.97	122	9.70	1.53	97	10.0	-22.3	-20.5

Conclusion : -

1. Fuel consumption depends on parameters, the vehicle characteristics, the driving behaviour, the road geometry and traffic condition. In these experiments, all factors were kept constant as possible, except the traffic was out of control.
2. According to the testing result, after installed 'GF 2000 Green Filter' unit to the engine would save 10.2 % and 12.1 % of fuel respectively on car speed 51 km/h and 87.6 km/h.
3. After installed 'GF 2000 Green Filter' unit to the engine, the exhaust gas quality was improved.

Comment :

1. The save fuel consumption can be obtained after the car had travelled about 576 km.
2. The poor condition engine may not obtain the similar result after installed 'GF 2000 Green Filter' unit.
3. 'GF 2000 Green Filter' unit is good for environmental protection.



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